

### **REMARKS**

The Official Action mailed August 17, 2004, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on July 12, 2000, and July 8, 2002.

Claims 20-24 are pending in the present application, of which claims 20 and 24 are independent. Claims 20, 22 and 24 have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 1 of the Official Action objects to claim 20 asserting that "the phrase 'a diameter of each of said plurality of light spots is diminished' ... is confusing and indefinite since it is not clear if the light spots are 'diminished' so that they *disappear all together* or that they are 'diminished' *with respect to diameters of some other spots* such as the diameters of *aberrant* light spots" (page 2, Paper No. 08132004, emphasis in original). It is noted that "diminished" means "to make smaller or less or to cause to appear so." As such, the term "diminished" is generally understood to mean something other than to "disappear all together" as asserted in the Official Action. In any event, the Applicants have amended claim 20 to recite "wherein said aberration is canceled so as to make a diameter of each of said plurality of light spots smaller all together." The Applicants respectfully submit that claim 20 is definite as amended. Accordingly, reconsideration and withdrawal of the objections are in order and respectfully requested.

The Official Action objects to claim 22 asserting that "the phrase 'a column of hologram patterns in said hologram member is arranged along a direction of a longer axis of an ellipsoidal spot area in a far field of said real laser light source' ... is confusing and indefinite" (Id.). In particular, the Official Action appears to be confused by the

terms “column” and “far field.” In response, claim 22 has been amended to recite “wherein a train of hologram patterns in said hologram member is arranged along a direction of a longer axis of an ellipsoidal spot area of said real laser light source.” The Applicants respectfully submit that claim 22 is definite as amended. Accordingly, reconsideration and withdrawal of the objections are in order and respectfully requested.

Paragraph 3 of the Official Action rejects claim 24 as obvious based on U.S. Patent No. 5,422,753 to Harris. The Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The Official Action, taking notice of the descriptions at column 5, line 64, to column 6, line 14, and Figures 2 and 2A in Harris, asserts that “Harris teaches that the

binary diffractive structure has a relief phase grating structure such that when the **single** incident light beam (50) incidents upon the diffraction grating it diffracts the light to provide a *zero order light beam* (52) which causes a *light spot formed* on the recording medium and the diffraction grating causes the light beam (52) and therefore the single light spot to have a *uniform intensity*" (page 3, Paper No. 08132004, emphasis in original).

However, the prior art does not teach or suggest all the features of the independent claims, as amended. Independent claim 24 has been amended to recite a distribution of optical intensity being a distribution of radial directions from a center of a light area. These features are supported in the specification, for example, at page 18, line 8, to page 19, line 25, with reference to Figures 6A to 6C, particularly the description "the light intensity distribution can be made uniform in some range about the optical axis center in a radial direction" at page 19, lines 16-18. Harris does not teach or suggest at least the above-referenced features of the present invention.

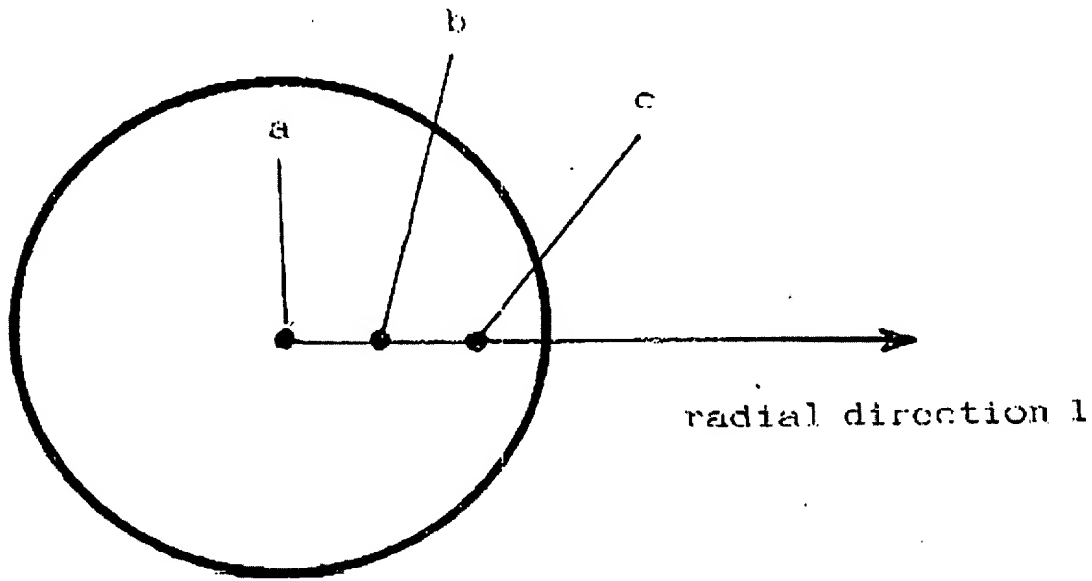
The present invention aims to form a servo light spot whose optical intensity is uniform over the whole area of the light spot. In the prior art, the servo light spot has a distribution of optical intensity that has a mountain shape with an apex at its center, as shown, for example, in Figure 6A. It is an object of the present invention to cause an optical intensity distribution to have a relatively flat shape as shown, for example, in Figure 6C.

By contrast, Harris is directed to a technique of scanning a light beam on a photoreceptor medium and Harris aims to render uniform the intensity of the scanning beam. In Harris, a plurality of light spots in time sequence is created by scanning a single light beam (52) on the medium. In such a situation, Harris aims to reduce the difference in intensity among the plurality of light spots.

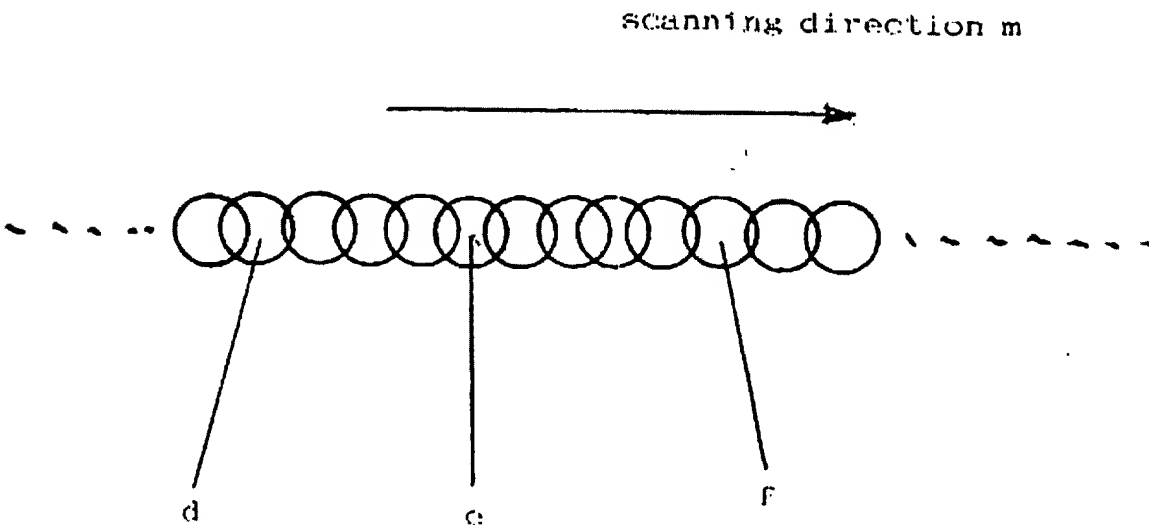
Thus, the present invention and the technique of Harris are essentially different in structure and objective from each other. Therefore, Harris does not recognize the problem in the prior art (as shown, for example, in Figure 6A), which the present

invention confronts. Specifically, Harris does not teach or suggest a distribution of optical intensity being a distribution of radial directions from a center of a light area.

In the present invention, the distribution of optical intensity within the area of a single light spot is rendered uniform. For example, as shown below, the distribution of optical intensity is adjusted so that the intensity levels at the points a, b and c (which are positioned along the radial direction) have the same value.



In contrast, Harris reduces the difference in optical intensity among a plurality of light spots which are created in time sequence by scanning a single light beam. For example, as shown below, the optical intensity is adjusted so that the intensity levels at the light spot d, e and f (which are positioned along the scanning direction m) have the same value.



This adjustment of optical intensity in Harris is clearly different from that in the present invention.

From another point of view, comparing the present invention with the technique of Harris, the present invention is distinguished from the technique of Harris in that the present invention has a distribution of optical intensity (which is made to be uniform) in radial directions from the center of the light area. In Harris, the intensity of the light spot is kept at a constant level during the scanning of the light beam, but this has nothing to do with the distribution in optical intensity of radial direction from the center of the light spot. Therefore, Harris does not teach or suggest a distribution of optical intensity being a distribution of radial directions from a center of a light area.

Since Harris does not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and

withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



---

Eric J. Robinson  
Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C.  
PMB 955  
21010 Southbank Street  
Potomac Falls, Virginia 20165  
(571) 434-6789